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EXAMINER	
WILLIAMS, DON J	

ART UNIT	PAPER NUMBER
2878	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/724,441	LEE ET AL.	
	Examiner	Art Unit	
	Don Williams	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/29/2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered second "claim 25" re-numbered to "claim 27". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-17, and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al in view of Erismann et al (5,818,337) and Shpater et al (6,215,399).

As to claims 1, 21, and 22 Schwartz et al disclose PIR motion detector (10), sensor (14), support structure (16), housing (12) forwardly looking windows (180a, 180b, 180c, 180d, 180e, 180f, 180g). Schwartz fail to disclose plurality of infrared

detection zones, far field of vision, and downward looking window disposed at the underside of housing, (see fig. 1). Shpater et al disclose infrared detection zones and far field of vision. Erismann et al disclose downward- looking windows (26A, 26B) disposed at the underside of housing (16) corresponding with a second support structure. It would have been obvious for one ordinary skill in the art to modify Schwartz et al to include infrared detection zones (12a, 12b, 12c) forming a first zonal pattern at a far field (12a) as disclosed by Shpater et al to improve the sensor signal to generate an alarm indicating the intrusion of an infrared emitting object being detected, (see fig. 3, column 4, lines 17-27). It would have been obvious for one ordinary skill in the art to modify Schwartz et al to include downward looking windows (26A, 26B) as disclosed by Erismann et al to increase and improve field of view detecting capability and enhance the passive infrared sensor signal sensitivity allowing infrared emitting objects to be detected, (see fig. 1, column 2, lines 42-62, fig. 2, column 3, lines 1-26).

As to claim 2, Schwartz et al disclose field behind motion detector housing (12) is monitored, (see fig. 1, column 3, lines 52-65). Schwartz et al fail to disclose first and second pluralities of detection zones. Shpater et al disclose detection zones (12a, 12b, 12c). It would have been obvious for one ordinary skill in the art to modify Schwartz et al to include detection zones (12a, 12b, 12c) as disclosed by Shpater et al to improve the sensor signal to generate an alarm indicating the intrusion of an infrared emitting object being detected, (see fig. 3, column 4, lines 17-27).

As to claim 3, Schwartz et al fail to disclose far and intermediate zonal patterns. Shpater et al disclose far and intermediate zonal patterns. It would have been obvious

for one ordinary skill in the art to include far zones (12a) and intermediate zones (12b, 12c) as disclosed by Shpater et al to increase and improve the space or zonal coverage allowing the passive infrared sensor to detect emitting objects at a far distant, (see fig. 3, column 4, lines 17-26).

As to claim 4, Schwartz et al disclose a motion detector (10), a sensor (14), forward looking windows (180a, 180b, 180c, 180d, 180e, 180f, 180g), (see fig. 1). Schwartz et al fail to disclose first and second plurality of detection zones. Shpater et al disclose detection zones (12a, 12b, 12c). Erisman et al disclose downward looking windows (26A, 26B, 26C). It would have been obvious for one ordinary skill in the art to modify Schwartz et al to include detection zones (12a, 12b, 12c) as disclosed by Shpater et al to increase and improve the space or zonal coverage allowing the passive infrared sensor to detect emitting objects at a far distant, (see fig. 3, column 4, lines 17-26). It would have been obvious for one ordinary skill in the art to modify Schwartz et al to include downward looking windows (26A, 26B, 26C) as disclosed by Erismann et al to increase and improve the focus field of view detecting capability and enhancing the passive infrared sensor signal sensitivity allowing infrared emitting objects to be detected, (see fig. 1, column 2, lines 42-62, fig. 2, column 3, lines 1-26).

As to claim 5, Schwartz et al disclose motion detector (10). Schwartz fails to disclose downward looking sensor and downward looking Fresnel lens member. Shpater et al disclose a downward looking sensor (16'). Erismann et al disclose downward looking Fresnel lens (26A, 26B, 26C). It would have been obvious for one ordinary skill in the art to include a downward looking sensor (16') as disclose by

Shpater to improve the sensor capability to detect more angulated zoning areas with regards to intruding emitting objects. It would have been obvious for one ordinary skill in the art to modify Schwartz et al to include downward looking Fresnel lens (26A, 26B, 26C) as disclosed by Erismann et al to improve the focus of the infrared light and increase the field of view allowing emitting objects to be detected, (see column 1, lines 42-63, fig. 1, column 2, lines 42-62,).

As to claim 6, Schwartz et al disclose segmented Fresnel lens (21, 23), (see fig. 1). Schwartz et al fail to disclose second zonal patterns. Shpater et al disclose zonal patterns (12A, 12B, 12C). It would have been obvious for one ordinary skill in the art to include zonal patterns (12A, 12B, 12C) as disclosed by Shpater et al to improve its dome shape and increasing the detection zonal area or space, (see fig. 3, column 4, lines 17-27).

As to claim 7, Schwartz et al disclose housing (12), and Fresnel lens (21, 23). Schwartz et al fail to disclose a downward looking sensor. Shpater et al disclose two sensors (16, 16') aligned opposite to each other on a vertical or central axis, (see fig. 6). It would have been obvious for one ordinary skill in the art to include sensor (16') aligned along a vertical or central axis in a downward direction to improve the detection zonal area or space defined by dome shape of the zonal patterns, (see fig. 3, column 4, lines 17-26, fig. 6, column 5, lines 44-62).

As to claim 8, Schwartz et al disclose sensor (14). Schwartz et al fail to disclose two sensors. Shpater et al disclose two sensors (16, 16'). It would have been obvious for one ordinary skill in the art to modify Schwartz et al to include two sensors (16, 16')

as disclose by Shpater et al to improve the detection of angulated detection zones, (see fig. 6, column 5, lines 44-67).

As to claim 9, Schwartz et al fail to disclose second zonal patterns conically shaped. Shpater et al disclose plurality of zonal patterns (12A, 12B, 12C). It would have been obvious for one ordinary skill in the art to include plurality of zonal patterns (12A, 12B, 12C) as disclosed by Shpater et al to improve the detection zonal area or space defined by the dome shape of the zonal patterns (12A, 12B, 12C), (see fig. 3, column 4, lines 17-26, fig. 6, column 5, lines 44-62).

As to claim 10, Schwartz et al fail to disclose second zonal patterns curtain shaped. Shpater et al disclose plurality of zonal patterns (12A, 12B, 12C). It would have been obvious for one ordinary skill in the art to include plurality of zonal patterns as disclosed by Shpater et al to improve the detection zonal area or space defined by the dome shape of the zonal patterns (12A, 12B, 12C), (see fig. 3, column 4, lines 17-26, fig. 6, column 5, lines 44-62).

As to claim 11, Schwartz et al disclose motion detector (10), one sensor (14), and forward looking windows (180a, 180b, 180c, 180d, 180e, 180f, 180g), (see fig. 1, column 3, lines 16-). Schwartz et al fail to disclose downward looking window). Erismann et al disclose downward looking windows (26A, 26B, 26C). It would have been obvious for one ordinary skill in the art to modify Schwartz et al to include downward looking windows (26A, 26B, 26C) as disclosed by Erismann et al to increase and improve the focus field of view detecting capability and enhancing the passive

infrared sensor signal sensitivity allowing infrared emitting objects to be detected, (see fig. 1, column 2, lines 42-62, fig. 2, column 3, lines 1-26).

As to claim 12, Schwartz et al disclose motion detector (10), segmented Fresnel lens (21, 23). Schwartz et al fail to disclose downward looking window and second zonal pattern form of a curtain pattern. Erismann et al disclose downward looking windows (26A, 26B, 26C). Shpater et al disclose plurality of zonal patterns (12A, 12B, 12C). It would have been obvious for one ordinary skill in the art to modify Schwartz et al to include downward looking windows (26A, 26B, 26C) as disclosed by Erismann et al to increase and improve the focus field of view detecting capability and enhancing the passive infrared sensor signal sensitivity allowing infrared emitting objects to be detected, (see fig. 1, column 2, lines 42-62, fig. 2, column 3, lines 1-26). It would have been obvious for one ordinary skill in the art to modify Schwartz et al to include plurality of zonal patterns as disclosed by Shpater et al to improve the detection zonal area or space defined by the dome shape of the zonal patterns (12A, 12B, 12C), (see fig. 3, column 4, lines 17-26, fig. 6, column 5, lines 44-62).

As to claim 13, Schwartz et al disclose motion detector housing (12) and rearward direction, (see fig. 1, column 4, lines 11-68). Schwartz et al fail to disclose second zonal patterns. Shpater et al disclose plurality of zonal patterns (12A, 12B, 12C). It would have been obvious for one ordinary skill in the art to include plurality of zonal patterns as disclosed by Shpater et al to improve the detection zonal area or space, (see fig. 3, column 4, lines 17-26, fig. 6, column 5, lines 44-62).

As to claim 14, Schwartz et al disclose motion detector housing (12), relative angle (α) with a horizontal rearward field of view, (see fig. 1, column 3, lines 60-68). Schwartz et al fail to disclose second zonal patterns. Shpater et al disclose plurality of zonal patterns (12A, 12B, 12C). It would have been obvious for one ordinary skill in the art to include plurality of zonal patterns as disclosed by Shpater et al to improve the detection zonal area or space, (see fig. 3, column 4, lines 17-26, fig. 6, column 5, lines 44-62).

As to claim 15, Schwartz et al disclose angles (α, β). Schwartz et al fail to teach the angles are 14 degrees or greater and second zonal patterns. Schrwartz et al disclose a wide rear horizontal field of view of the motion detector (10). Shpater et al disclose plurality of zonal patterns (12A, 12B, 12C). It would have been obvious for one ordinary skill in the art to include plurality of zonal patterns as disclosed by Shpater et al to improve the detection zonal area or space, (see fig. 3, column 4, lines 17-26, fig. 6, column 5, lines 44-62). It would have been obvious for one ordinary skill in the art to include a wide rear horizontal field of view of the motion detector (10) as disclosed by Schwartz et al to improve and define a wide angle to allow the motion detector (10) to detect emitting objects in an increased space or zonal area, (see fig. 1, column 3, lines 52-68).

As to claim 16, Schwartz et al disclose motion detector (10) and rearward field of view. Schwartz et al fail to disclose second plurality of detection zones and dense zonal patterns under motion detector (10). Shpater et al disclose plurality of zonal patterns (12A, 12B, 12C). Erismann et al disclose zonal patterns under the motion detector

device (10), (see fig. 1). It would have been obvious for one ordinary skill in the art to include plurality of zonal patterns as disclosed by Shpater et al to improve the detection zonal area or space, (see fig. 3, column 4, lines 17-26, fig. 6, column 5, lines 44-62). It would have been obvious for one ordinary skill in the art to attach Fresnel lenses (26A, 26B, 26C) under the lower surface (16) of the detector housing to form layers of zonal patterns to increase the space or zonal area coverage allowing emitting objects approaching at various positions of the detection zones to be detected, (see fig. 1, column 2, lines 42-67).

As to claim 17, Schwartz et al disclose forward and backward coverage and angles (α, β). Schwartz et al fail to exactly teach one level of vision per twelve degrees and second plurality of detection zones. Schwartz et al teach a wide rear horizontal field of view of the motion detector (10). It would have been obvious for one ordinary skill in the art to include a wide rear horizontal field of view of the motion detector (10) as disclose by Schwartz et al to improve and define a wide angle corresponding to angles (α, β) to allow the motion detector (10) to detect emitting objects in an increased space or zonal area, (see fig. 1, column 3, lines 52-68, fig. 1a, column 4, lines 10-65). Shpater et al disclose plurality of zonal patterns (12A, 12B, 12C). It would have been obvious for one ordinary skill in the art to include plurality of zonal patterns as disclosed by Shpater et al to improve the detection zonal area or space, (see fig. 3, column 4, lines 17-26, fig. 6, column 5, lines 44-62).

As to claim 23, Schwartz et al disclose a motion detector (10). Schwartz et al fail to disclose a pair of sensors. Shpater et al disclose a pair of sensors (16, 16'). It would

have been obvious for one ordinary skill in the art to modify Schwartz et al to include a pair of sensors as disclosed by Shpater et al to improve the detecting capability of an increased space or zonal area allowing the sensors (16,16') to detect emitting objects within the proximity of the plurality of detection zones, (see fig. 3, column 4, lines 17-26, fig. 5, column 4, lines 42-57).

As to claim 24, Schwartz et al disclose the second optical arrangement (20) comprised of reward Fresnel lens (21, 23) define shorter focal lengths compared to the first optical arrangements (180, 181, 182), (see fig. 1a, fig. 1b, and fig. 1c, column 4, lines 1-67).

As to claim 25, Schwartz et al disclose first optical arrangement comprise of Fresnel lens (180, 181, 182), sensor (14). Schwartz et al fail to disclose second optical arrangement in a downward direction. Erismann et al disclose second optical arrangement comprise of Fresnel lens (26A, 26B, 26C). It would have been obvious for one ordinary skill in the art to modify Schwartz et al to include Fresnel lens (26A, 26B, 26C) located on the lower side (16) of the housing as disclosed by Erisman et al to improve sensor detecting ability and allowing emitting objects to be detected at various angulated positions corresponding to the motion detector, (see fig. 1, column 2, lines 31-62).

As to claim 26, Schwartz et al disclose first Fresnel lens (180, 181, 182), sensor (14), shorter focal lengths, and second Fresnel lens (21, 23), (see fig. 1, column 3, lines 17-65, column 4, lines 1-65. It would have been obvious for one ordinary skill in the art to include second Fresnel lens (21, 23) to improve the focus of the detecting sensor and

increasing the detecting sensibility of the sensor allowing emitting objects to be detected at various angulated positions, (see fig. 1a, column 4, lines 1-65).

Claims 18-20, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz et al in view of Shpater et al (6,215,399).

As to claims 18, 19, 20, Schwartz et al disclose an aimable PIR motion detector (10) and housing (12), (see fig. 1). Schwartz et al fail to disclose plurality of infrared detection zones, first group of detection zones, first zonal patterns, far field, azimuth θ, tan φlimit = sin θ tan 60°, tan φlimit = sin θ tan 50°, and tan φlimit = sin θ tan 30°. Shpater et al disclose plurality of infrared detection zones (12a, 12b, 12c), first zonal patterns (12a, 12a'), far field (12a, 12a), azimuth θ. It would have been obvious for one ordinary skill in the art to modify Schwartz et al to include plurality of infrared detection zones (12a, 12b, 12c), first zonal patterns (12a, 12a'), far field (12a, 12a') and azimuth θ as disclosed by Shpater et al to improve and increase the space or detection zone area allowing angulated backward and forward zonal patterns to increase the range of detecting emitting objects within the proximity of the detection zones, (see fig. 1, column 3, lines 34-67, fig. 3, column 4-67).

As to claim 27, Schwartz et al disclose forward and backward coverage and angles (α, β). Schwartz et al fail to exactly teach one level of vision per twelve degrees and second plurality of detection zones. Schwartz et al teach a wide rear horizontal field

of view of the motion detector (10). It would have been obvious for one ordinary skill in the art to include a wide rear horizontal field of view of the motion detector (10) as disclosed by Schwartz et al to improve and define a wide angle corresponding to angles (α, β) to allow the motion detector (10) to detect emitting objects in an increased space or zonal area, (see fig. 1, column 3, lines 52-68, fig. 1a, column 4, lines 10-65). Shpater et al disclose plurality of zonal patterns (12A, 12B, 12C). It would have been obvious for one ordinary skill in the art to include plurality of zonal patterns as disclosed by Shpater et al to improve the detection zonal area or space, (see fig. 3, column 4, lines 17-26, fig. 6, column 5, lines 44-62).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Don Williams whose telephone number is 571-272-8538. The examiner can normally be reached on 8:30a.m. to 5:30a.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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